

ABSTRACT OF THE DISCLOSURE

The present invention provides a semiconductor transistor using an L-shaped spacer and a method of fabricating the same. The semiconductor transistor includes a gate pattern formed on a semiconductor substrate and an L-shaped third spacer formed beside the gate pattern and having a horizontal protruding portion. An L-shaped fourth spacer is formed between the third spacer and the gate pattern, and between the third spacer and the substrate. A high-concentration junction area is positioned in the substrate beyond the third spacer, and a low-concentration junction area is positioned under the horizontal protruding portion of the third spacer. A medium-concentration junction area is positioned between the high- and low-concentration junction areas. A method of fabricating the semiconductor transistor includes a process, where the high- and medium- concentration junction areas are formed simultaneously by the same ion-implantation step and the substrate is annealed before forming the low-concentration junction area.